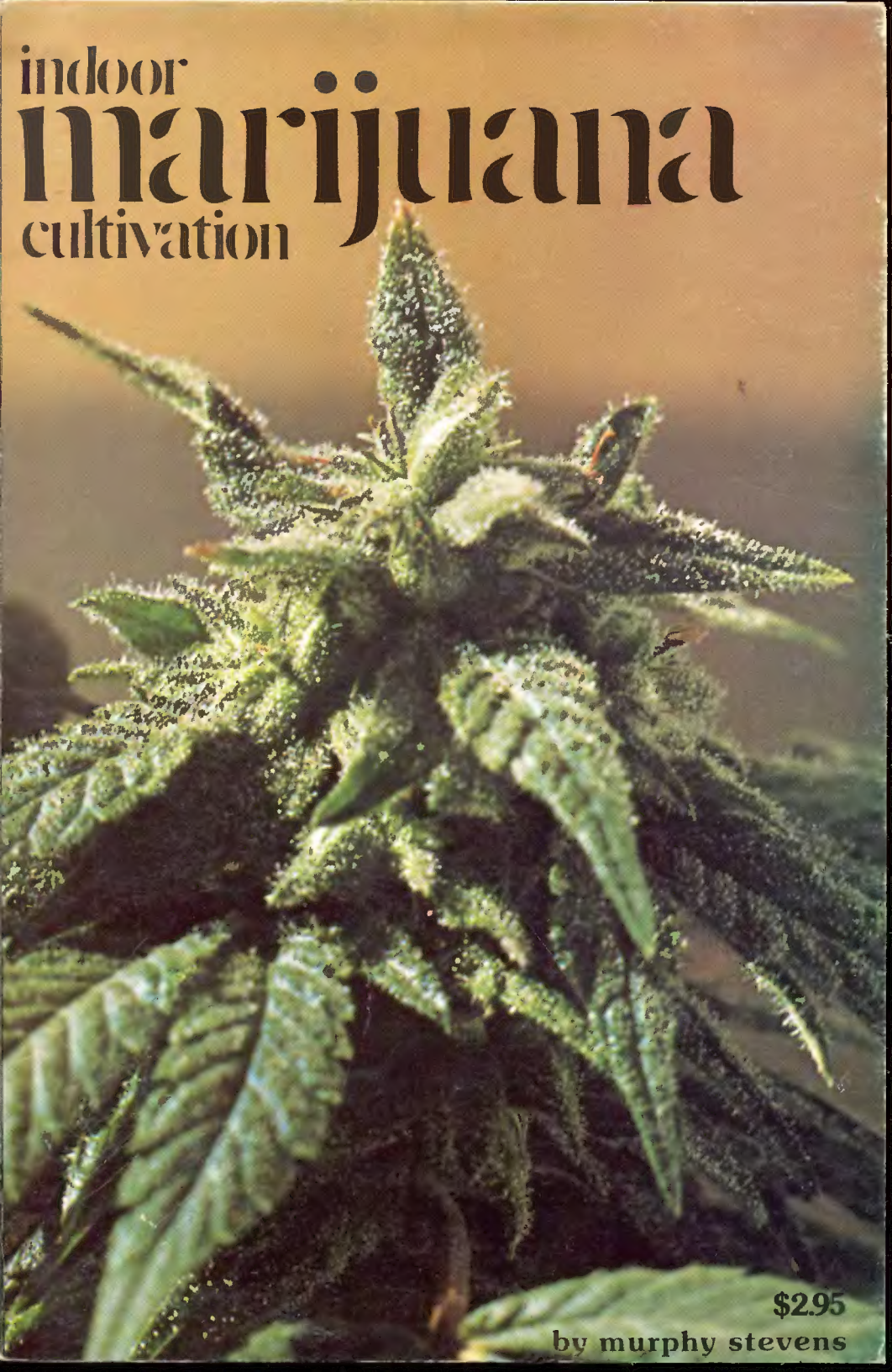
# indoor marijuana cultivation



$2.95

by murphy stevens

**This book is an accumulation of information on some of the best methods people are using to grow Marijuana indoors under artificial lights. This book is in no way intended to encourage or promote the illegal cultivation of Marijuana. It is illegal to cultivate Marijuana in the United States as in most countries, therefore, it is the author's recommendation that you read this book for your own personal information. However, much of the information in this book can be applied to growing the majority of legal plants such as most house plants, vegetables, and many of the tropical plants that under normal conditions cannot be cultivated in a home.**

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# INTRODUCTION

Growing marijuana indoors is fast becoming an American pastime. The reasons are varied. With the increased interest and experimentation in house plant cultivation, it was inevitable that people would apply their knowledge of plant care to growing marijuana. Many of those who occasionally like to light up a number may find it difficult to locate a source or are hesitant to deal with a perhaps unsavory element of society in procuring their grass. There is, of course, the criminal aspect of buying or selling grass. Growing marijuana is just as illegal as buying, selling or smoking, naturally, but growing is something you can do in the privacy of your own home, without having to deal with someone you don't know or trust. The best reason for growing your own is the enjoyment you will get out of watching those tiny little seeds you picked out of your lid sprout and become some of the most lovely and lush of all house plants.

# ANYONE CAN DO IT

Even if you haven't had any prior experience with growing plants in your home, you can have a successful crop of marijuana by following the simple directions in this book. If you have had problems in the past with your marijuana cultivation, you may just find the solutions in the following chapters.

You can grow a marijuana plant in just four easy steps:

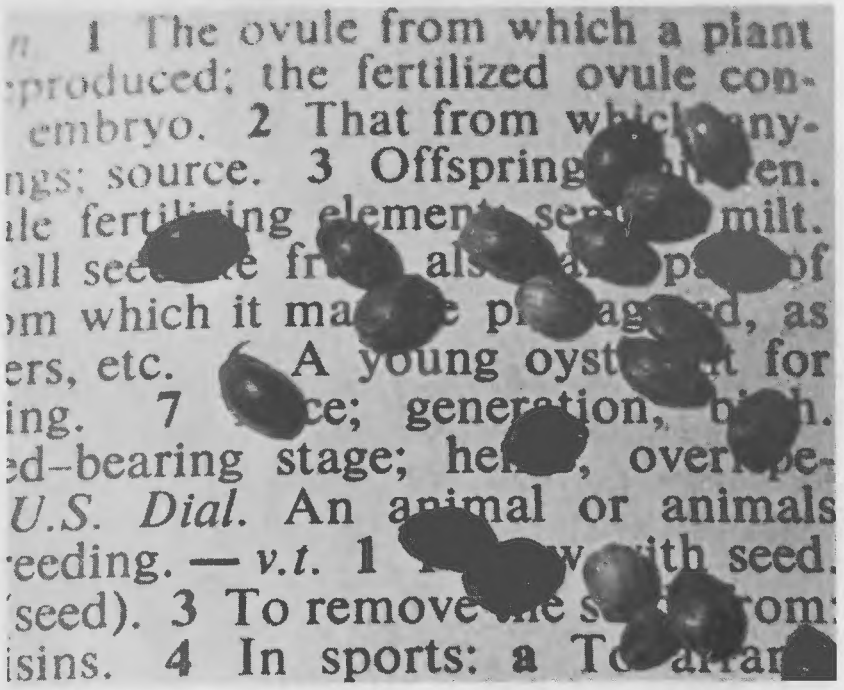
1. ***Get the seeds.*** You can ask your friends to save you seeds out of any good grass they come across. You'll find that lots of people already have a seed collection of some sort and that they are willing to part with a few prime seeds in exchange for an ounce or two of the finished product.

2. ***Germinate the seeds.*** You can simply drop a seed into moist soil, but by germinating the seed first, you can be sure that the seed will indeed produce a plant. To germinate a seed, place a group of them in between about 6 moist paper towels. Leave the towels in a warm place and be sure to keep the towels moist but not soaking wet. Some seeds will germinate in 24 hours while others may take several days or even a week.

3. ***Plant the sprout.*** As soon as the seed cracks open and begins to sprout, place it on some moist soil and sprinkle a little soil over the top of it.

4. ***Supply the plants with light.*** Fluorescent lights are best. Hang the lights within 2 inches of the soil and after the plants appear above the ground, continue to keep the lights within 2 inches of the plants. It is as easy as that. If you do those four things you will grow a marijuana plant. To insure prime quality and the heaviest yield in the shortest time period, however, seeing to a few details is necessary.

marigold yellow The brigh
color of various marigolds.
mar-i-hua-na (mar'ə-wä'nə, Sp. mä'r
The hemp plant (Cannabis sativa).
dried leaves and flower tops yield a narcotic
smoked in cigarettes. Also ma'ri-jua'na.
[<Am. Sp. marihuana, mariguana, ? blend of
N. Am. Ind. name and Sp. Maria Juana Mary
Jane, a personal name]
Mar-i-po-sa



# SOIL

Your prime concern, after choosing high quality seeds, is the soil. Use the best soil you can get. Scrimping on the soil doesn't pay off in the long run. If you use unsterilized soil, you will almost certainly find parasites in it, probably after it is too late to transplant your marijuana. You can usually find excellent soil for sale at your local plant shop or nursery. The soil you use should have these properties for the best possible results:

1. It should drain well, that is, it should have some sand in it and also some sponge rock or pearlite.

The pH should be between 6.5 and 7.5 since marijuana does not do well in acidic soil. High acidity in the soil encourages the plants to be predominately male.

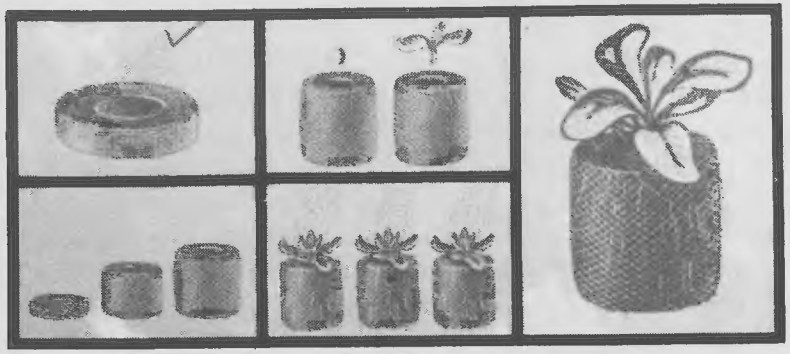
3. The soil should also contain humus for retaining moisture and nutrients.

If you want to make up your own soil mixture, you can use this recipe: Mix 2 parts peat moss with 1 part sand and 1 part pearlite or sponge rock. To each 4 gallons of soil, add 1½ pounds of lime. Test your soil for pH with litmus paper or with a soil testing kit available at most plant stores. To raise the pH of the soil, add ½ pound of lime to one cubic foot of soil to raise the pH 1 point. If you insist on using dirt you dug up from your drive-way, you better sterilize it by baking it in your oven for about an hour at 250 to 275 degrees. Be sure to moisten it thoroughly first and also prepare your self for a rapid evacuation of your kitchen because that hot soil is going to really stink it up.

Now add to the mixture about 4 tablespoons of fertilizer (like Rapid-Gro) to four gallons of soil and blend it in thoroughly.

# CONTAINERS

After you have prepared your soil, you'll have to come up with some kind of container to plant in. The containers should be sterilized too, especially if they have been used previously for growing other plants. The size of the container has a great deal to do with the rate of growth and the overall size of the plant. You should plan on transplanting your plant not more than one time since the process of transplanting can be a shock to the plant and it will have to undergo a recovery period in which growth is slowed or even stopped for a short while. The first container you use should be no larger than 6 inches in diameter and can be made of clay or plastic. To transplant, simply prepare the larger pot by filling it with soil and scooping out a little hole about the size of the pot the plant is in. Turn the plant upside down, pot and all, and tap the rim of the pot sharply on a counter or the edge of the sink. The soil and root ball should come out of the pot cleanly with the soil retaining the shape of the pot and with no disturbance to the root ball. Another method that can bypass the transplanting problem is that of using a Jiffy-pot. Jiffy-pots are made of compressed peat moss and can be planted right into moist soil where they decompose and allow the passage of the root system through their walls.



The second container should have a volume of at least 3 gallons. Marijuana doesn't like to have its roots bound or cramped for space, so always be sure that the container you use will be deep enough for your plant's root system. It is very



difficult to transplant a 5 foot marijuana tree so plan ahead, it is going to get bigger. The small plants should be ready to transplant into their permanent homes in about ten days. Keep a close watch on them after the first week or so and avoid root binding them at all costs since the plants never seem to do as well once they have been stunted by the cramping of their roots.

***Double potting allows more room for root development.***

# FERTILIZER

Marijuana likes lots of food but you can do damage to the plants if you are too zealous. Some fertilizers can burn a plant and damage its roots if used in too high a concentration. Most commercial soil will have enough nutrients in it to sustain the plant for about three weeks of growth so you don't need to worry about feeding your plants until the end of the third week.

The most important thing to remember is to introduce the fertilizer concentration to the plant gradually. Start with a fairly diluted fertilizer solution and then gradually increase the dosage. There are several good marijuana fertilizers on the commercial market, two of which are Rapid-Gro and Eco-Grow. Rapid-Gro has had widespread use in marijuana cultivation and is available in most parts of the United States. Eco-Grow is also especially good for marijuana since it contains an ingredient that keeps the soil from becoming acid. Most fertilizers cause a pH change in the soil, adding fertilizer to the soil almost always resulting in a more acidic pH.

As time goes on, the amount of salts produced by the breakdown of fertilizers in the soil causes the soil to become increasingly more and more acidic and eventually, the concentration of these salts in the soil will stunt the plant and cause browning out of the foliage. Also, as the plant gets older, its roots become less effective in bringing food to the leaves. To avoid the accumulation of these salts in your soil and to insure your plant getting all the food it needs, you can begin leaf feeding your plant at the age of about 1½ months. Dissolve the fertilizer in warm water and spray the mixture directly onto the foliage. The leaves absorb the fertilizer into their veins. If you want to continue to put fertilizer into the soil as well as leaf-feeding, be sure not to overdose your plants.

Remember to increase the amount of food your plant receives gradually. Marijuana seems to be able to take as much fertilizer as you want to give it as long as it is introduced over a period of time.

During the first three months or so, fertilize your plants every few days. As the rate of foliage growth slows down, in the plant's preparation for blooming and seed production, the fertilizer intake of the plant should be slowed down too. Never fertilize the plant just before you are going to harvest it since the fertilizer will encourage foliage production and slow down resin production.

A word or two here about the most organic of fertilizers — worm shit. As you probably know, worms are raised commercially for sale to gardeners. The breeders put the worms in organic compost mixtures and while the worms are reproducing, they eat the organic matter and expell some of the best marijuana food around. After the worms have eaten all the organic matter in the compost, they are removed and sold and the remains are then sold as "worm castings". These castings are so rich that you can grow marijuana in straight worm castings. This isn't really necessary however, and is somewhat impractical since the castings are very expensive. If you can afford them you can, however, blend them in with your soil and they make a very good organic fertilizer.

# LIGHT

Without light, the plant cannot grow. In the countries in which marijuana grows best, the sun is the source of light. The amount of light and the length of the growing season in these countries results in huge tree-like plants. In most parts of North America, however, the sun is not generally intense enough for long enough periods of time to produce the same size and quality of plants that grow with ease in Latin America and in other tropical countries. The answer to the problem of lack of sun, especially in the winter months, or the lack or excess of humidity, or the length of the growing season, or the infestation by bugs or marauding animals, is to grow indoors, under simulated conditions. The rule of thumb seems to be the more light the better. In one experiment we know of,

eight 8-foot VHO Gro-Lux fixtures were used over eight plants. The plants grew at an astonishing rate. The lights had to be raised every day. There are many types of artificial light and all of them do different things to plants. The common light bulb emits some of the rays of light that the plant can use but it also emits a high percentage of "far red" and infra red light which cause the plant to concentrate its growth on its stem. This results in the plant stretching toward the light bulb until it becomes too tall and spindly that it just weakly topples over.

There are several brands of bulb-type incandescent plant "spot lights" which emit higher amounts of red and blue light than the common light bulb. They are an improvement but they have their drawbacks. They are hot, for example, and cannot be placed close to the plants. Consequently, the plant has to stretch upwards again and is in danger of becoming elongated and falling over. The red bands of light seem to encourage stem growth which is not too desirable in growing marijuana. The idea is to encourage foliage growth, for obvious reasons.

Gro-Lux lights are probably the most common fluorescent plant lights. In our experience with them, they have proven themselves to be extremely effective. They range in size from one to eight feet in length so that you can set up a growing room in a closet or a warehouse. There are two types of Gro-Lux lights: the Standard and the Wide Spectrum. They can be used in conjunction with one another but the Wide Spectrum lights are not sufficient on their own. The Wide Spectrum lights were designed as a supplementary light source and are cheaper than the Standards. Wide Spectrum lights emit the same bands of light as the Standards but the Standards emit higher concentrations of the red and blue bands that the plant needs to grow. The Wide Spectrum lights also emit infra-red, the effect of which (on stem growth) we have already discussed. If you are planning to grow on a large scale, you might be interested to know that the regular fluorescent lamps and fixtures, the type that are used in commercial lighting, work well when used along with Standard Gro-Lux lights. These commercial lights are called Cool Whites and are the cheapest of

**ENERGY EMISSION IN ARBITRARY COLOR BANDS**
**40 WATT FLUORESCENT LAMPS**
**In Watts and Percent of Total Emission**

| | Band in Nano-meters | Daylight | | Cool White | | Std Gro-Lux | | Gro-Lux/ws | |
|---|---|---|---|---|---|---|---|---|---|
| | | Watts | Percent | Watts | Percent | Watts | Percent | Watts | Percent |
| Ultra-Violet | -380 | 0.186 | 2.15 | 0.16 | 1.68 | 0.10 | 1.42 | 0.27 | 3.16 |
| Violet | 380-430 | 0.832 | 9.60 | 0.72 | 7.57 | 0.70 | 9.67 | 1.07 | 12.48 |
| Blue | 430-490 | 2.418 | 27.91 | 1.98 | 20.78 | 1.96 | 27.07 | 1.22 | 14.29 |
| Green | 490-560 | 2.372 | 27.38 | 2.35 | 24.67 | 1.02 | 14.02 | 1.24 | 14.49 |
| Yellow | 560-590 | 1.259 | 14.53 | 1.74 | 18.27 | 0.10 | 1.42 | 0.83 | 9.77 |
| Orange | 590-630 | 1.144 | 13.21 | 1.69 | 17.75 | 0.44 | 6.05 | 1.36 | 15.93 |
| Red | 630-700 | 0.452 | 5.22 | 0.81 | 8.47 | 2.86 | 39.55 | 1.86 | 21.78 |
| Far-Red | 700-780 | 0.13 | 1.53 | 0.07 | 0.81 | 0.06 | 0.80 | 0.69 | 8.10 |
| TOTAL | | 8.89 | 100.00 | 9.52 | 100.00 | 7.24 | 100.00 | 8.54 | 100.00 |



the fluorescent lights we have mentioned. They emit as much blue light as the Gro-Lux Standards and the blue light is what the plant uses in foliage growth.

Now we come to the question of intensity. Both the Standards and Wide Spectrum lamps come in three intensities, regular output, high output, and very high output. You can grow a nice crop of plants under the regular output lamps and probably be quite satisfied with your results. The difference in using the HO or VHO lamps is the time it takes to grow a crop. Under a VHO lamp, the plants grow at a rate that is about three times the rate at which they grow under the Standard lamps. People have been known to get a plant that is four feet tall in two months. Under the VHO lights one may have to raise the lights every day which means a rate of growth of at least two inches a day. The only drawback is the expense of the VHO lamps and fixtures. The VHO lamps and fixtures are almost twice the price of the Standards. If you are interested in our opinion, they are well worth it.

Now that you have your lights up (we hope) you might be curious about the amount of light to give your plants per day. There is a ratio between the amount of light the plant gets per day and its maturation date or, in other words, when the plant blooms. The ratio is roughly, the *longer* the dark period per day, the *sooner* the plant will bloom. Generally speaking, the less dark per day the better in the first six months of the plant's life. The older the plant is before it blooms and goes to seed, the better the grass will be. After the plant is allowed to go to seed, its metabolic rate is slowed so that the plant's quality does not increase with age at the same rate it did before the bloom. The idea, then, would be to let the plant get as old as possible before allowing it to mature so that the potency will be as high as possible at the time of harvest. One relatively sure way to keep your plants from blooming until you are ready for them to is to leave the lights on all the time. Occasionally a plant will go ahead and bloom anyway but it is the exception rather than the rule.

If your plants receive 12 hours of light per day they will probably mature in 2 to 2½ months. If they get 16 hours of light per day they will probably be blooming in 3½ months to 4 months. With 18 hours of light per day they will flower in 4½ months to 5 months..

## TEMPERATURE AND HUMIDITY

The ideal temperature for the light hours is 68 to 78 degrees and for the dark hours there should be about a 15 degree drop in temperature. The growing room should be relatively dry if possible. What you want is a resinous coating on the leaves and to get the plant to do this, you must convince it that it needs the resinous coating on its leaves to protect itself from drying out. In an extremely humid room, the plants develop wide leaves and do not produce as much resin. You must take care to not let the temperature in a dry room become too hot, however, since the plant cannot assimilate water fast enough through its roots and its foliage will begin to brown out.

## VENTILATION

Proper ventilation in your growing room is fairly important. The more plants you have in one room, the more important good ventilation becomes.

Plants breathe through their leaves. They also rid themselves of poisons through their leaves. If proper ventilation is not maintained, the pores of the leaves will become clogged and the leaves will die. If there is a free movement of air, the poisons can evaporate off the leaves, and the plant can breathe and remain healthy.

In a small closet where there are only a few plants, you can probably create enough air circulation just by opening the door to look at them. Although it is possible to grow healthy looking plants in poorly ventilated rooms, they would be larger and even healthier if they had a fresh supply of air coming in.

If you spend a lot of time in your growing room, your plants will grow better because they will be using the carbon dioxide that you are exhaling around them.

It is sometimes quite difficult to get a fresh supply of air into your growing room because your room is usually hidden away in a secret corner of your house, possibly in the attic or basement. In this case, a fan will create some movement of air. It will also stimulate your plants into growing a healthier and sturdier stalk. Often times in an indoor environment, the stems of plants fail to become rigid because they don't have to cope with elements of wind and rain. To a degree, though, this is an advantage because the plant puts most of its energy into producing leaves and resin instead of stems.

## DEHUMIDIFYING
## YOUR GROWING ROOM

Cannabis that grows in a hot, dry climate will have narrower leaves than cannabis grown in a humid atmosphere. The reason is that in a dry atmosphere the plant can respirate easier because the moisture on the leaves evaporates faster. In a humid atmosphere the moisture cannot evaporate as fast. Consequently, the leaves have to be broader, with more surface area, in order to expel the wastes that the plant puts off. Since the broad leaves produce less resin per leaf than the narrow leaves, there will be more resin in an ounce of narrow leaves than in an ounce of broad leaves. There may be more leaf mass in the broader leafed plants, but most people are growing their own for quality rather than quantity.

Since the resin in the marijuana plant serves the purpose of keeping the leaves from drying out, there is more apt to be a lot of resin produced in a dry room than in a humid one.

In the "Sears" catalog dehumidifiers cost around $100.00 and so are a bit impractical for the "Hobby Grower".

# WATERING

If you live near a clear mountain stream, you can skip this bit on the quality of the water. Most of us are supplied water by the city and some cities add more chemicals to the water than others. They all add chlorine, however, in varying quantities. We humans, over the years have learned to either get rid of it somehow or to live with it but your marijuana plants won't have time to acquire a taste for it so you had better see they don't have to. Chlorine will evaporate if you let the water stand for 24 hours in an open container. Letting the water stand for a day or two will serve a dual purpose: the water will come to room temperature during that period of time and you can avoid the nasty shock your plants suffer when you drench them in cold water. Always water with room temperature to lukewarm water. If your water has an excessive amount of chlorine in it, you may want to get some anti-chlorine drops at the local fish or pet store.

The most important thing about watering is to do it thoroughly. You can water a plant in a 3 gallon container with as much as 3 quarts of water. The idea is to get the soil evenly moist all the way to the bottom of the pot. If you use a little water, even if you do it often, it seeps just a short way down into the soil and any roots below the moist soil will start to turn upwards toward the water.

The second most important thing about watering is to see to it that the pot has good drainage. There should be some holes in the bottom so that any excess water will run out. If the pot won't drain, the excess water will accumulate in a pocket and rot the roots of the plant or simply make the soil sour or mildew. The soil, as we said earlier, must allow the water to drain evenly through it and must not become hard or packed. If you have made sure that the soil contains sand and pearlite, you shouldn't have drainage problems.

To discover when to water, feel the soil with your finger. If you feel moisture in the soil, you can wait a day or two to water. The soil near the top of the pot is always drier than the soil further down. You can drown your plant just as easily as you can let it get too dry and it is more likely to survive a dry spell than it is to survive a torrential flood. Water the plants well when you water and don't water them at all when they don't need it.

# SEX

The female of the species is the more potent of the two sexes. More potent meaning that the leaves contain more of the chemical THC which is the main active ingredient in marijuana. We wish we could tell you how to insure a predominately female crop but we don't know any sure fire ways. The acid content of the soil is one thing we know about; if your soil is low in acidity you will have fewer male plants than you would if you grew in acidic soil.

While growing some marijuana we noticed that during the fourth month 6 of the 8 plants had female pistles protruding from the crotch of stem and branch. These pistles were not fertilized because there were no male plants with pollen flowers. The pistles just dried up and fell off and nothing happened for a month. Then four of the 6 plants started blooming male flowers. We suspect that if those pistles on the stem had been fertilized, the plant would have been told somehow that there were already male plants in the area and that they could go ahead and be female if they wanted to. As it was, the first blooms were *not* fertilized and something told the plant it had better produce some male flowers to insure the survivial of the species. We also found that cutting off the male flowers resulted in the plant blooming again in a couple of weeks, this time with female blossoms, pods and seeds. These plants also increased the amount of resin they were producing as male plants.

# BUGS

If you can avoid getting bugs in the first place, you'll be much better off. Once your plants become infested, you'll probably be fighting the bugs for the rest of your plant's life. To avoid bugs, be sure to use sterilized soil and containers and don't bring other plants into the growing room from outside. If you have pets, see that they stay out of your growing room since they can bring in pests on their fur. Examine your plants regularly for signs of insects, spots, holes in the leaves, browning of the tips of the leaves, and droopy branches. If you find that somehow, in spite of all your precautions, you have a plant room full of bugs, you'll have to spray your plants with some kind of insecticide. You'll want to use something that will kill the bugs and not you.

Spider mites are probably the bug that does the most damage to marijuana plants. One of the reasons is that they are almost microscopically small and very hard to spot. They are called "spider" mites because they leave a web-like substance clinging to the leaves. They also cause tiny little spots to appear on the leaves. Probably the first thing you'll notice, however, is that your plants look sick and depressed. The mites suck enzymes from the leaves and as a result, the leaves lose some of their green color and glossiness. Sometimes the leaves look like they have some kind of fungus of them. The eggs are very tiny black dots.

You might be wise to get a magnifying glass somewhere so that you can really scrutinize your plants closely. Be sure to examine the underside of the leaves too; the mites will often be found clinging to the underside as well as the top of the leaves. The sooner you start fighting the bugs, the easier it will be to get rid of them. For killing spider mites on marijuana, one of the best insecticides is "Fruit and Berry" spray made by Millers. Ortho also produces several insecticides that will kill mites. The ingredients to look for are Kelthane and Malathion. Both of these poisons are lethal to humans and pets as well as bugs but they both detoxify in about ten days so you can safely smoke the grass after waiting ten days after spraying. Fruit and Berry will only kill the adult mite however, and you'll have to spray every four days for about two weeks to be sure that you have killed all the adults before they have had a chance to lay eggs. Keep a close watch on your plants because it only takes one egg laying adult to re-infest your plants and chances are that one or two will escape your barrage of insecticides.

If you see little bugs flying around among your plants they are probably white flies. The adults are immune to almost all the commercial insecticides except Fruit and Berry which will not kill the eggs or larva. It is the larval stage of this insect that does the most damage, they suck out enzymes too and can kill your plants if they go unchecked. You'll have to get on a spraying program just as was explained in the Spider Mite section.

An organic method of bug control is using soap suds. Put Fels Naptha or Ivory Flakes in some luke warm water and work up the suds into a lather. Then put the suds over the plant. This sounds weird but it works with no apparent harm to the plant. The obvious disadvantage is if you don't rinse the soap off the plant you'll taste the soap when you smoke the leaves.

# PRUNING

We have found that pruning is not always necessary. The reason one does it in the first place is to encourage secondary growth and allow light to reach the immature leaves. Some strains of grass just naturally grow thick and bushy and if they are *not* clipped, the sap moves in an uninterrupted flow right to the top of the plant where it produces flowers that are thick with resin.

On the other hand, if your plants appear tall and spindly for their age at three weeks, they probably require a little trimming to insure a nice full, leafy plant. At three weeks of age, your plants should have at least two sets of branches or four leaf clusters and a top. To prune the plant, simple slice the top off just above the place were two branches oppose each other. Use a razor blade in a straight cut.

If you want to, you can root the top in some water and when roots appear, plant the top in moist soil and it should grow into another plant. If you are going to root the top, you should cut the end again, this time with a diagonal cut so as to expose more surface to the water or rooting solution. The advantage to taking cuttings from your plant is that it produces more tops. The tops have the most resin, and that's the name of the game. Everytime you cut off a top the plant sends out two more top branches at the base of the existing branches. Pruning also encourages the branches underneath to grow faster than they normally would without the top having been cut.

# HARVESTING AND CURING

Well, now that you've grown your marijuana, you'll want to cure it right so that it smokes clean and won't bite. You can avoid that "homegrown" tast of chlorophyll that sometimes makes one's fillings taste like they might be dissolving.

We know of several methods of curing the marijuana so that it wil have a mild flavor and a mellow rather than harsh smoke.

First, pull the plant up, roots and all and hang it upside down for 24 hours. Then put each plant in a grocery bag with the top open for 3 or 4 days or until the leaves feel dry to the touch. Now strip the leaves off the stem and put them in a glass jar with a lid. Don't pack the leaves in tightly, you want air to reach all the leaves. The main danger in the curing process is mold. If the leaves are too damp when you put them into the jar they will mold and since the mold will destroy the resins, mold will ruin your marijuana. You should check the jars every day by smelling them and if you smell an acrid aroma take the weed out of the jar and spread it out on newspaper so that it can dry quickly. Another method is to uproot the plants, and hang them upside down outside. You get some burlap bags damp and slip them up over the plants. Keep the bags damp and leave them in the sun for at least a week. Now put the plants in a paper bag for a few days until the weed is dry enough to smoke.

We've heard of a method for getting the resins to rush to the top leaves. You boil some water and after you uproot your plants you plungs the root system in the boiling water. We tried it and it seemed to work but it kind of gave us the creeps to do that to our plants after tending it so carefully for 8 months.

Like many fine things in life, Marijuana mellows out with age. The aging process tends to lose the chlorophyll taste.

For additional tips on growing marijuana I'll suggest my revised edition of *How to Grow Marijuana Indoors Under Lights*. In addition to having 16 pages of color photographs, there is information on planting according to the moon cycles, using CO2 in your growing room, taking cuttings, using dry ice and Colchicine to increase potency.

Good Luck.

# Indoor Garden Supply Company Catalog

## GRO-LUX LAMPS

| | |
|---|---|
| 18" 15W | $ 4.98 |
| 24" 20W | 5.25 |
| 36" 30W | 5.49 |
| 48" 40W | 5.95 |
| 48" WS | 3.95 |
| 48" VHO 110W | 12.95 |
| *96" 73W | 8.55 |
| *96" WS | 6.95 |
| *96" HO 110W | 10.60 |
| *96" HOWS | 7.00 |
| *96" VHOWS | 8.50 |
| *96" VHO 215W | 14.20 |
| 1000 watt metal halide | 76.00 |

## FIXTURE AND LAMPS
### All Standard Gro-Lux Lamps

| | |
|---|---|
| 18" single | $14.95 |
| 24" single | 15.50 |
| 24" double | 22.95 |
| 36" single | 19.50 |
| 48" single | 20.00 |
| 48" double | 29.00 |
| 48" double w/hood | 35.00 |
| 48" VHO | 87.00 |
| *96" double | 39.50 |
| *96" HO | 72.50 |
| *96" VHO | 90.00 |

For fixture and lamp combination orders, figure the same weight as the fixture alone.

## FIXTURES ONLY

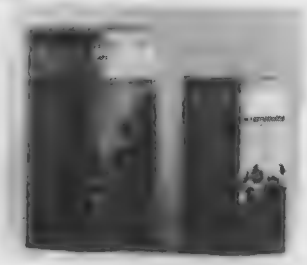
| | |
|---|---|
| 18" single, 3 lbs | $ 10.00 |
| 24" single, 4 lbs | 10.00 |
| 24" double, 6 lbs | 15.00 |
| 36" single, 6 lbs | 15.00 |
| 48" single, 8 lbs | 15.00 |
| 48" double, 10 lbs | 20.00 |
| 48" VHO double, 28 lbs | 65.00 |
| *96" double, 18 lbs | 25.00 |
| *96" HO double, 24 lbs | 45.00 |
| *96" VHO double, 30 lbs | 65.00 |
| 1000 watt metal halide fixture, 24 lbs | 175.00 |

**All fixtures comes with electric cord and instructions**

**Shipping Information:* Please note that these items cannot be shipped via UPS or U.S. mail because of size. Therefore it is necessary to ship via truck at a minimum rate of $18.00 for shipping and insurance for up to 100 pounds delivered to your door. $10.00 for Washington, Idaho, and Oregon residents. All truck shipments C.O.D.

*Discounts* on orders of 10-15: 10% off.
Call for larger quanitity prices

# PLANT LIGHTS



## INCANDESCENT PLANT LIGHTS

These lamps make an excellent supplemental lighting source to be used in conjunction with the flourescent growing lamps. They fit a standard light socket.

| | |
|---|---|
| 60 watt bulb | $2.49 |
| 75 watt bulb | $4.30 |
| 150 watt bulb | $4.60 |

## INCANDESCENT LIGHTING FIXTURE

Made of porcelain, to take the high heat incandescent lamps put out. The fixture comes with a clamp so that it can be mounted anywhere.

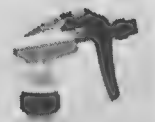
| | |
|---|---|
| Incandescent light fixture | $4.95 |
| Fixture with 150 watt lamp, 1 lb. | $9.00 |

## SWAG HOOKS

For use in hanging the plant light fixture.

Swag Hooks, two per package, 3 oz. ..... 98¢ pk.

MISCELLANEOUS



## SPRAY BOTTLES

Spray Bottles make the feeding and application of insecticides and fertilizer easy. The spray is completely adjustable, from a heavy spray to a fine mist.

1 qt., 1 lb. ..... $2.25
1 pt., 1 lb. ..... $1.59

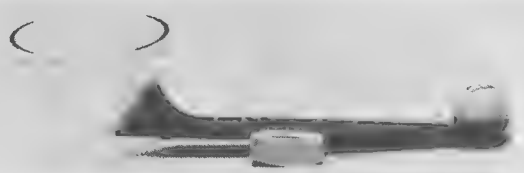
Comes complete with everything but seeds: 30 lbs. of crushed Kona lava, two specially formulated nutrients, electric aeration pump, circulation system, nutrient dispenser, pH test kit, peat pellets, poster, instruction manual and full guarantee. Recommended by *High Times* and *Head* Magazines. Includes all shipping and handling, $49.95.

## HEATING OR VENTILATING CONTROL

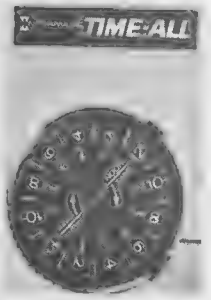
Keep the growing room at a constant temperature automatically with this sensitive thermostat. Range adjustment from 30° to 110° F. Rated at 16 amps at 120 volts 60Hz 2500 watts. Great for green house application. Instructions for electrical hook-up included.

Thermostat, 1 lb..... $24.95

## BALANCE SCALE



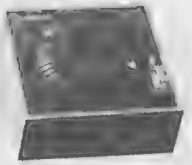
Large ..... $14.95
Small ..... 7.95
New! Of high impact plastic. Very accurate. Capacity of small, 125 grams; large, 500 grams.




## INTERMATIC CORDLESS TIMER

When growing plants indoors under artificial lighting, it is important to keep the day and night period the same everyday to prevent premature flowering. With the use of a timer, you can sit back and forget it. The lights will turn on and off automatically.

1875 watt capacity, 1 lb.... $8.95



## INTERMATIC TIMER

This timer can be set to turn on and off up to 24 times daily, (with additional trippers). It has a minimum of 30 minute on-off period. Comes with two sets of trippers.

Intermatic Timer, 2 lbs. ... $13.95

## HYGROMETER

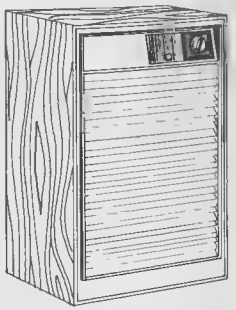
For those of you who want to know the humidity of the growing room, this hygrometer will tell you with an accuracy you can count on.

Hygrometer, 12 oz. ..... $23.95

MISCELLANEOUS

# MISCELLANEOUS

### WHITE-WESTINGHOUSE DEHUMIDIFIER



A must for indoor growing rooms where high humidity is a problem. Humidistat-controlled to keep the growing room at a preset humidity. Model ED 1445 has a capacity of 14 pints per day.

Dehumidifier, 48 lbs. ..... $159.95

### COLCHICINE

This chemical causes mutations in plants. Caution should be taken since it is poisonous. The colchicine comes in its organic form, therefore it must be extracted from these special flower bulbs that contain 0.3 percent colchicine. The very easy process takes only minutes. One bulb is enough for many hundreds of plants. Makes polyploidal plants.

Bulbs ..... $2.50 each

### GARLIC PRESS

For squeezing juice from colchicine bulbs

$2.50

### LIME

For increasing pH of soil. One-half pound per cubic foot of soil to raise pH by one point.

3 lb. bag ..... 98¢

# SOIL TEST KITS

### Sudbury PH Test Kit

Can be used to test soil, water, or nutrient solutions. Simple instructions included. Tests PH from 4.5 to 7.5.

PH tester, 3 oz. ..... $2.49

### PH Test Paper

Test water and nutrient solutions from 4.5 to 7.5 pH by simply comparing the color of the paper to the color chart.

PH test paper, 5 yards ..... $2.49

Large ..... $15.95
Medium, Size D ..... 9.95

Tests pH, nitrogen, phosphorus, and potash content of soil.

Grow better plants with this complete kit. Tells you what to add to your soil for better plants. Complete instructions enclosed. Also comes with an organic supplement to let you know what natural elements will alter the chemistry of the soil.

NUTRIENTS

## ORTHO FISH'N SIX 14-6-8

Made from fish emulsion and trace elements, this fertilizer works well for growing all plants. Being high in nitrogen, it grows lush green foliage. Ortho Fish'n Six is deodorized, and comes in 16 oz., 1 qt. sizes.

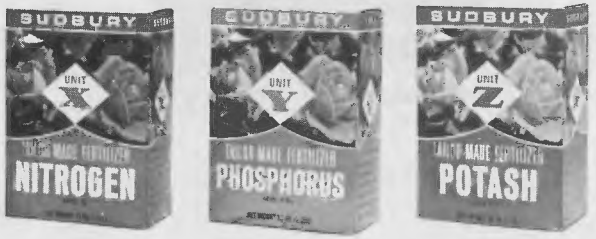
16 oz. ..... $1.19
1 qt., 1 lb. ..... $1.95

*Note that the numbers following the brand name indicate the percentage of nitrogen, phosphorus, and potash contained in that particular nutrient.

## ORTHO GREENOL LIQUID IRON

Iron deficiency is one problem easily alleviated with use of Ortho Greenol. A plant with an iron deficiency will appear pale green in color, and may have brown tips. Used as directed, Greenol will help your plants back to health.

16 oz. ..... $1.98




## SUDBURY XYZ

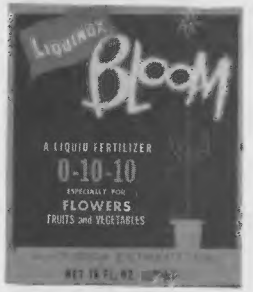
If you want to make up your own plant nutrient, these elements are the basis for all nutrient solutions. Nitrogen, phosphorus, and potash.

Unit Y 44% nitrogen, 1 lb. ..... $2.29
Unit Y 44% phosphorus, 1 lb. ..... $2.29
Unit Z 44% potash, 1 lb. ..... $2.29

## ECOGROW

An excellent complete balanced plant nutrient made for hydroponics. It works great for all your plants needs. A small amount goes a long way!

8 oz. ..... $1.98
16 oz. ..... $2.98




## LIQUINOX BLOOM LIQUID FERTILIZER

Bloom is to be used prior to budding to help make plants stronger and more resistant to disease.

16 fl. oz., 1 lb. ..... $1.98

## RA-PID-GROW 23-19-17

This oldie but goldie has been a favorite to many home growers for years.

8 oz. ..... $1.25
16 oz. ..... $1.98

## ROOTONE F

This is excellent for rooting the cutting you take from your plants. It contains a fungicide to control damping off, which often attacks new cuttings.

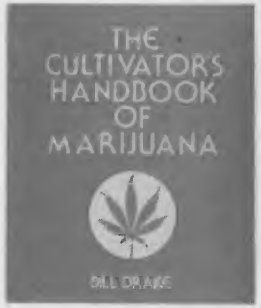
4 oz. ..... 98¢

NUTRIENTS

BOOKS

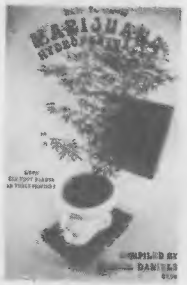
**How to Grow Marijuana Indoors Under Lights**
*by Murphy Stevens* ..... $3.95
An excellent book on the subject of cultivating Marijuana indoors. Everything you need to know from germinating seeds to harvesting. Sixteen pages of color.

**Cultivators Handbook of Marijuana**
*by Bill Drake* ..... $2.50
An Oldie, but Goldie; one of the first books on the subject of growing marijuana. This book is full of hints for the home cultivator.




**Cooking With Marijuana**
*by Evelyn Schmevelyn* ..... $2.95
Smoking more and enjoying it less? Try eating your next lid. This marijuana cookbook has plenty of palatable recipes. Some of which are delicious.

**How to Grow Marijuana Hydroponically**
*by Patrick Daniels* ..... $3.95
Grow plants up to four inches per day without soil! All the information you need to grow your favorite plant or weed hydroponically. Fully illustrated.



**How To Identify and Grow Psilocybin Mushrooms**
*by Jule Stevens and Rich Gee* ..... $5.95
At last, a mushroom book that is easy to understand and informative. Written in laymens terms, it contains a complete field guide for all psilocybin species, with over 30 color photographs for easy identification. Plus, tried and tested fool-proof methods of cultivating mushrooms.

**Magickal Mushroom Handbook**
*by Richard Miller* ..... $2.95
This twenty-page pamphlet details the more common psylocybin mushrooms found in the United States. Included are line drawings and a four-page color photo section that make for easy identification for mushroom hunters who wish to track down and study the species.

**Psilocybin Grower's Guide**
*by Oss & Oeric* ..... $4.95
This is a unique work in the literature of psychedelics: a concise, comprehensible, and detailed volume which literally tells you how to locate the spores and grow your own mushrooms using mason jars, chalk, soil, and a pressure cooker.

**The Pill Book**
*by Vito Perillo* ..... $3.95
This 64 page paperback is a reference and identification guide to the most widely used and abused prescription drugs. Eight pages of color plates show amphetamines (Christmas Trees, Black Beauties, etc.), sedatives (Quaaludes, Sopors, etc.) tranquilizers (Valium, Librium, etc.) and many more.

BOOKS

# POTS



## JIFFY-7

These pellets will expand when soaked in water for a short period of time. They are very good for starting seeds in. To transplant, simply place the whole pellet into the soil.

Jiffy-7, ½ lb. per doz. ..... 79¢ dozen



## BR 8 GROWING CUBES

The BR 8 is a paper product used to start seedlings the easy way. It has excellent absorbability, and will retain moisture for long periods of time. They come 12 cubes per tray.

BR 8's, 5 oz. ..... 75¢ each tray
10 & over ..... 69¢ each tray
Case of 84 Trays ..... $44.95

## JIFFY POTS



These pots made of compressed peat moss are the best bet to start seeds in. They will last for a long time outside of soil, but will decompose when planted into soil. They will save time and evergy when transplanting.

2¼" diameter ..... 59¢ doz.
3" diameter ..... 79¢ doz.
4" diameter ..... $149 doz.
(½ lb. per dozen)

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